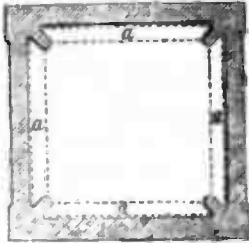


## HOLLOW BRICKS.

As the question of hollow bricks is at present attracting attention, I beg to send you a section of a hollow brick, which combines many advantages, and may be moulded as easily as any other form. The angle-ribs in the inside give strength and surface at that portion of the joint, and enable dowels *a a a* to be inserted on any or all sides to close the joint.\* By this means a continuous



flue, perfectly tight, may be formed. Two of the external faces are even and plain, two are partially recessed: these latter are supposed to be the beds, or side joints, as the case may be, and the slight sinking is to relieve the hollow side and thin portion of the brick from undue weight or bearing in the work,—to bring this upon the solid edges, and also to act as a slight lock, or dowel, with the cement or mortar. The bricks also burn truer with this arrangement, and any inequality or outward swell in burning is not so injurious as it would be on a surface without such sinking. The joint dowels will only be required where one surface or more is exposed, or where any particular course requires to be made into a continuous flue for ventilation, or any other similar purpose. For partitions, or for lining external walls, where plaster is to be used, the dowel will not be required. The section shown is square, but any other form of section is as easily moulded by the machine, and may be adopted. In arches of short radius the exact form can be given. Tiles or bricks of this description, if for cottage floors, may have the upper side stronger than the other side. Thus, a brick 6 inches square may have three sides  $\frac{1}{2}$ ths of an inch thick; the upper side should not be less than  $1\frac{1}{2}$  inch thick. There is no practical difficulty in effecting this: I have had such made.

Where these bricks are required for ventilation, any form of opening may be made in the sides, after the clay has been partially dried, and before it is burned. The underside of a ceiling may be perforated either with circular or slit openings, one or more in each tile, so as to insure diffuse ventilation. The open ends of the bricks may be connected with a shaft, or shafts, to insure a proper outlet. Earl Grey has covered some of his cattle-sheds at Hawick with bricks of this description. The outside of the arch is coated with asphalt, and forms a roof perfectly dry.

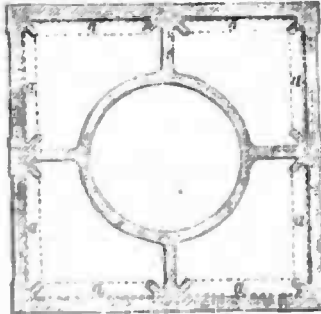
Hollow bricks offer to the architect many and singular advantages. They may be made cheaper than common bricks; they require much less clay. The material is finer, more compressed, and much better burned, as there is a fire-skin† within and without. Hollow bricks require less drying, and less fuel to burn them. They are also lighter for carriage. Floors and partitions may be constructed fire-proof at the least cost of material: timber partitions need not in any case be used on account of weight. External works may be lined with the hollow bricks instead of being battened, so that rot will be prevented. For conservatories they may be used with singular advantages. Heat may be passed through every portion of both floors and walls.

The hollow bricks may be cut to any length with the same facility as a common brick, with ordinary care. A sharp-pointed hammer may be used to nick them along the line of proposed cut, and they will then break off at such line. Or a certain number of this bricks may be nicked across before they are burned, when

they can afterwards be divided as required. When the bricks are required for plastering, such as inside partitions or ceilings, the sides may be grooved or roughened by the die, so as to afford good hold to the mortar on the broader bed than ordinary brickwork presents.

Hollow bricks may be made 9 or 12 inches square, and from 1 to 3 feet long, the strength of the solid material in no part exceeding  $\frac{1}{4}$  or  $\frac{1}{2}$  of an inch. The section in this case will be compound, or chambered, not unlike some of the beautiful chambered shells, the nautilus, or more beautiful fossil ammonites. For floors, arches, and walls, where size and lightness is required, this form of section offers many facilities.

Barracks in India may be constructed with such bricks, as clay properly treated, which would not mould and burn into the solid brick, will make this form of brick. The weight may be four-fifths less than solid bricks.



Dowels may be inserted at *a a a*, &c.

Bricks of this section have been made 9 inches square and 2 feet long; equal in cube capacity to fifteen bricks each.

ROBERT RAWLINSON.

## RAILWAY JOTTINGS.

CONSIDERABLE damage has been done by fire to stations at Colchester and Gloucester. An engine-shed belonging to the Eastern Union at the former, and containing three of the company's best engines, took fire on Friday week, and was entirely destroyed; loss estimated at nearly 3,000*l*. The fire originated with a stove. In the other case, a wooden building, containing a furnace, where smiths' work was done, took fire by the overheating of the furnace, and was also burnt down; estimated loss at least 1,000*l*. It is said to be "a singular fact, that a similar fire occurred on the same premises about eighteen months since;" but the only singularity seems to be that two fires only should have occurred in course of eighteen months in such a building.—The Admiralty and the Holyhead Company, it is said, have come to an open rupture. The company purports to withdraw their boats, and discontinue a passenger train.—Circumstances showing the urgent necessity of providing footways or a regular beat for guards or watchmen along trains in transit are constantly occurring. No less than three such cases of urgency now happen to attract our attention at one and the same time. A correspondent of the *Times*, in describing a recent accident on the East Lancashire, in which some carriages in a train ran off the line, and were dragged for nearly a mile before the crash came, states that during all this perilous and most alarming crisis, six passengers were in vain attempting to attract the guard's attention; and he suggests the old difficulty,—signals, to be attended to by the guard with "notice to the engine-driver / such notice be necessary." Now we have again and again shown, that in many instances the guard can only judge of this necessity by coming within ear-shot as well as eye-shot of the passengers signalling; and, besides that, in many cases of the greatest necessity for his watchful presence near the passengers, no such signal can or may be given. Witness another of the instances now under notice—namely, the drugging of a passenger by thieves in a carriage, where he was robbed at leisure, on the way from Sheffield to Doncaster. In the third of these recent instances, another ruffian attempted to outrage the per-

son of a girl in a train while running from Newcastle to Tyne-mouth. Can it be supposed for a moment that such places as railway carriages would be chosen for the commission of such crimes, if it were the regular practice for watchmen to traverse the trains while in transit? Yet, under present circumstances, and quite recently, even violent murder had been committed in a train, deliberately chosen for the purpose, as already instanced, simply because the isolation effectually prevented all interruption, and the noise all chance of cries for help being heard. It is full time the recommendation of the Railway Commissioners, based primarily on our own humble efforts, in this case, were carried out; and a recent project of the North Kent Company, if properly realized with this view, appears to afford a good occasion for the adoption of such a necessary system of espionage. The directors have given orders for the construction of several carriages, one of which is completed, capable of holding ninety-six persons. They are built in four compartments, with seats for twenty-four persons in each. A train of large carriages, too, it appears, requires much less power for propelling than those now in use—an argument with Directors which we hope will prove of more force than that based on the public safety, comfort, and convenience, has hitherto proved to be.—The German papers state that Mr. Gunther, head of the locomotive factory at Neustadt, near Vienna, has solved the problem relative to the ascent of trains on inclined planes; and built an engine which will draw, with ease, a train of 50,000 cwt. up an incline of 40 to 50 degrees.

## A NOTE FROM CORK.

THE Cork School of Design is now in full operation; it was opened on Monday, the 14th, when an inaugural address was delivered by the principal master, Mr. Willis, upon the nature, objects, and influence of schools of design, and containing some interesting historical notices of art and artists in Ireland. There was a numerous and respectable auditory assembled in the lecture room of the Royal Cork Institution. Some credit was attached to the occasion, by the presence of the mayor, aldermen, and town councillors, with their insignia of office, and several of the new college professors.

The Directors of the Royal Cork Institution, have given a large suite of rooms for the use of the school; they have also given the use of their collection of casts from the antique, presented to that body by George the Fourth, which were originally a present to that monarch from the Pope. The government has given 500*l*. the corporation of Cork 200*l*.

The head master, Mr. Willis, is a native of Cork; the assistant master is Mr. Knight. There are already more than 100 pupils in the school.

The new church of St. Nicholas is nearly completed, and will be opened in March.

The new church of Ballymodan, London, which was consecrated two months since, was closed in three weeks after its consecration: it was discovered that the dry rot had made considerable devastation in the flooring of the body of the church; the consequence is, the whole has been taken up. The want of proper ventilation under the flooring has been generally considered the cause; this is being now remedied. A correspondent says, "the doings of the ecclesiastical commissioners and their architects in Ireland, have been a fruitful source of discontent and jobbery. Efforts are being made to awaken the authorities to the sanitary condition of the place. We are in an awful state here, with every natural facility to ensure efficient drainage, cleanliness, and water supply."

LIVERPOOL ARCHITECTURAL SOCIETY.—At a meeting at the Royal Institution, Mr. Charles Barber in the chair, a paper was read by Mr. Horner, on the "Legitimate Use of Rustication" in architecture. A discussion followed, and Mr. C. Reid stated that the Town-hall of Liverpool presented one of the oldest specimens of rusticated architecture in the north of England.

\* The bricks may be made 4 inches square, or 6 inches square; any of the sides may be perforated for purposes of ventilation.

† Cast-iron is known to be stronger as the section possesses more or less surface, or fire skin, to the solidity, other things considered.